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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/707,150	11/24/2003	Frederick W. Kern Jr.	BUR920030085US1	1149
29625	7590	12/15/2004	EXAMINER	
MCGUIRE WOODS LLP			JOLLEY, KIRSTEN	
1750 TYSONS BLVD.			ART UNIT	
SUITE 1800			PAPER NUMBER	
MCLEAN, VA 22102-4215			1762	

DATE MAILED: 12/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/707,150

Applicant(s)

KERN, FREDERICK W.

Examiner

Kirsten C Jolley

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-2, 9, 12, 14-18, and 24-28 are rejected under 35 U.S.C. 102(e) as being anticipated by Olgado et al. (US 6,689,418).

With respect to independent claims 1, 18, and 25, Olgado et al. discloses a method for processing a workpiece comprising: providing a plurality of contacts (fingers 72 and 73 - see Figure 3B); processing a surface of the workpiece; and releasing at least one of the fingers during the processing step. Olgado et al. teaches that during processing a first set of fingers 72 grips the workpiece, then second set of fingers 73 grips the workpiece while the first set of fingers 72 are released (col. 5, line 58 to col. 6, line 14).

As to claims 2 and 14, Olgado et al. teaches a method in which the upper and lower surfaces of the workpiece are exposed to processing fluids (col. 5-6).

As to claims 9 and 26, Olgado et al. teaches rotating during the step of processing fluids (col. 6, lines 1-3).

As to claims 12, 24, and 27, first and second sets of fingers 72, 73 are released in alternating order.

As to claim 16, Olgado et al. teaches blowing gas on the front side of the substrate in col. 5, lines 32-34, which would dry the substrate.

As to claim 28, Olgado et al. illustrates that fingers 72 are in first, third, and fifth positions while fingers 73 are in second, fourth, and sixth positions (Figure 3B).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3-8, 10-11, 13, and 19-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Olgado et al.

As to claims 3, 13, and 19, Olgado et al. discloses first and second sets of fingers 72, 73 with six fingers each (see Figure 3B). However, it is the Examiner's position that the number of fingers per set would be a matter of design preference depending upon the size of the substrate, the speed of rotation, strength of grip of the fingers, etc., and it would have been obvious for one skilled in the art to have optimized the number of fingers in sets 72 and 73 depending upon the above process parameters.

As to claims 4-7 and 20-21, the first set 72 remains in contact with the workpiece while the second set 73 is released from the workpiece, thus allowing process fluids to flow unimpeded at the locations on the workpiece where the second set of contacts is released (col. 5, line 58 to col. 6, line 14). Then the first set 72 is released while the second set 73 is moved into contact

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with the workpiece. As to claim 8, Olgado et al. illustrates first and second sets of fingers at alternating positions around the substrate in Figure 3B.

As to claim 10, Olgado et al. teaches that the fingers may be actuated while the spin chuck is rotated, independent of the spinning (col. 6, lines 5-7). The process of Olgado et al. necessarily comprises the step of accelerating because at times the substrate starts from a stopped position and then is accelerated up to its normal rotation speed. While Olgado et al. does not state that each of the plurality of fingers holds the workpiece during acceleration, this would have been an obvious variation to one having ordinary skill in the art since more stability of the wafer would be required during the acceleration step, and because Olgado et al. teaches that the fingers are capable of being actuated independent of the spinning.

As to claim 11, while Olgado et al. does not teach releasing the fingers in a sequential order, it is the Examiner's position that this would have been an obvious process variation since Olgado et al. teaches that its apparatus is not limited to the particular embodiment described and because the fingers are capable of actuating independently.

As to claim 22, Olgado et al. illustrates that fingers 72 are in first, third, and fifth positions while fingers 73 are in second, fourth, and sixth positions.

Conclusion

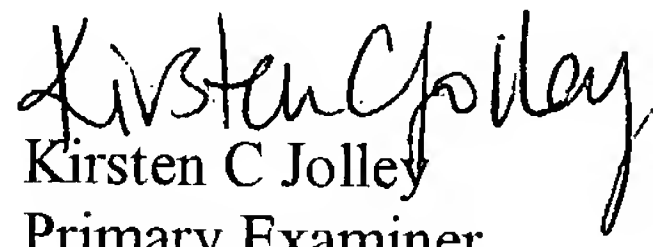
5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Summitsch (US 4,903,717), Thompson et al. (US 5,230,743), Summitsch (US 5,762,391), Pirker (US 5,931,518), and Pirker (US 6,152,507) are cited to illustrate the state of the art with respect to apparatus and process for gripping wafers during processing.

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6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kirsten C Jolley whose telephone number is 571-272-1421. The examiner can normally be reached on Monday to Thursday and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive P Beck can be reached on 571-272-1415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Kirsten C Jolley
Primary Examiner
Art Unit 1762

kcj